CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 90-081

NPDES PERMIT NO. CA0110116

REISSUING WASTE DISCHARGE REQUIREMENTS FOR:

U.S. NAVY, NAVAL SUPPORT ACTIVITY
TREASURE ISLAND, SAN FRANCISCO COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region, hereinafter called the Board, finds that:

1. The United States Navy, hereinafter called the discharger, submitted a report of waste discharge dated December 29, 1989, for reissuance of NPDES Permit No. CA0110116 for the Naval Support Activity, Treasure Island. The discharge is presently governed by waste discharge requirements contained in Order No. 85-61 issued by the Board on May 15, 1985.

2. The discharger presently discharges an annual average of 0.7 million gallons per day (mgd) of domestic waste from its wastewater treatment plant located on the north side of Treasure Island into San Francisco Bay, a water of the United States, at latitude 37 Deg/49 Min/50 Sec and longitude 122 Deg/21 Min/25 Sec. The waste receives secondary treatment (trickling filter) with chlorination and dechlorination, and is discharged through a submarine outfall 400 feet offshore in 30 feet of water. Average dry weather design flow is 2.0 mgd and peak wet weather design flow is 4.4 mgd. Sludge from the wastewater treatment facility is stabilized in anaerobic digesters and reprocess for fertilizer.

3. To improve the operational reliability, the plant is currently undergo series of major process improvements. The improvement programs consist of:

   -- Construction of Equalization Basin
   -- Addition of a Plastic Media Trickling Filter
   -- Renovation of the Primary Sedimentation Basin
   -- Construction of a Secondary Sedimentation Basin
   -- Modification to Sludge Handling System
   -- Construction of an Operation/Laboratory Building

4. The Regional Board adopted a revised Water Quality Control Plan for the San Francisco Bay Region (Basin Plan) on December 17, 1986, and the State Water Resources Control Board (SWRCB) approved it on May 21, 1987.

5. The benificial uses of San Francisco Bay and contiguous water bodies are:

   Industrial Service Supply
   Industrial Process Supply
   Naigation
   Water Contact Recreation
   Non-Contact Water Recreation
   Ocean Commercial and Sport Fishing
   Wildlife Habitat
   Preservation of Rare and Endangered Species
   Fish Migration
   Fish Spawning
   Shellfish Harvesting
   Estuarine Habitat

6. An Operations and Maintenance Manual is maintained by the discharger for purposes of providing plant and regulatory personnel with a source of information describing all equipment, facilities, and recommended operating strategies, process control monitoring, and maintenance activities. In order to remain a useful and relevant document, this manual should be kept updated to reflect significant changes in plant facilities or activities.

7. This Order serves as an NPDES Permit, reissuance of which is exempt from the provision of Chapter 3 (commencing with Section 21100) of Division 13 of the Public Resources Code (CEQA) pursuant to Section 13389 of the California Water Code.

8. The discharger and interested agencies and persons have been notified of the Board's intent to reissue requirements for the existing discharge and have been provided with the opportunity for a public hearing and the opportunity to submit their written views and recommendations.

9. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, that the discharger in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder and the provisions of the Clean Water Act as amended and regulations and guidelines adopted thereunder shall comply with the following:

A. Discharge Prohibitions

1. Bypass or overflow of untreated wastewater to waters of the State either at the treatment plant or from any of the discharger's interceptor system and pump stations tributary to the treatment plant is prohibited.

2. The average dry weather flow shall not exceed 2.0 mgd. Average shall be determined over three consecutive months each year.

B. Effluent Limitation

1. Effluent discharged shall not exceed the following limits:

Constituents	Units	Monthly Average	Weekly Average	Maximum Daily	Instantaneou Maximum
a. Settleable Matter	ml/l-hr	0.1	--	--	0.2
b. BOD (5-day)		30	45	--	--
c. Total Suspended Solid	mg/l	30	45	--	--
d. Oil & Grease	mg/l	10	--	20	--
e. Total Chlorine Residual (1)	mg/l	--	--	--	0.0

(1) Requirement defined as below the limit of detection in standard test method.

2. The arithmetic mean of the biochemical oxygen demand (5-day, 20°C) and suspended solids values, by weight for effluent samples collected in calendar month shall not exceed 15 percent of the arithmetic mean of the respective values, by weight, for influent samples collected approximately the same times during the same period (i.e. 85 percent removal).

3. The moving median value for total coliform in any five consecutive effluent samples shall not exceed 240 MPN/100 ml. Any single sample shall not exceed 10,000 MPN/100 ml when verified by repeat sample within 48 hours.

4. The pH of the discharge shall not exceed 9.0 nor be less than 6.0.

5. The survival of test organisms acceptable to the Executive officer in 96-hour bioassays of the effluent shall achieve a 90 percentile value of not less than 50% survival based on the ten most recent consecutive samples. Bioassays shall be performed using two test species in parallel tests: three-spined stickleback and fathead minnow.

6. Representative samples of the effluent shall not exceed the following limits (1):

Constituent	Unit of Measurement	Daily Maximum
a. Arsenic	ug/l	200
b. Cadmium	ug/l	30
c. Chromium(VI) (2)	ug/l	110
d. Copper	ug/l	200
e. Lead	ug/l	56
f. Mercury	ug/l	1
g. Nickel	ug/l	71
h. Silver	ug/l	23
i. Zinc	ug/l	580
j. Cyanide	ug/l	25
k. Phenols	ug/l	500
l. Polynuclear Aromatic Hydrocarbons (3)	ug/l	150
m. Selenium (4)		

(1) There limits are intended to be achieved through secondary treatment, source control and application of pretreatment standards.

(2) The discharger, at its option, may meet this limit as total chromium.

(3) As identified by EPA Method 610. If a discharge exceeds the limit for PAHs, concentrations of individual constituents should be reported.

(4) Selenium limitation to be established.

C. Receiving Water Limitations

1. The discharge of waste shall not cause the following conditions to exist in waters of the State at any place:

   a. Floating, suspended, or deposited macroscopic particulate matter or foam;

   b. Bottom deposits or aquatic growths;

   c. Alternation of temperature, turbidity, or apparent color beyond present natural background levels;

   d. Visible, floating, suspended, or deposited oil or other products of petroleum or origin;

   e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or water fowl, or which render any of these unfit for human consumption wither at levels created in the receiving waters or as result of biological concentration.

2. The discharge of waste shall not cause the following limits to be exceeded in waters of the State in any place within one foot of the water surface:

a.	Dissolved Oxygen	5.0 mg/l minimum. Median of any three consecutive months shall not be less than 80% saturation. When natural factors cause lesser concentrations than those specified above, then this discharge shall not cause further reduction in the concentration of dissolved oxygen.
b.	Dissolved Sulfide	0.1 mg/l maximum.
c.	pH	Variation from natural ambient pH by more than 0.5 pH units.
d.	Un-ionized Ammonia	0.025 mg/l as N Annual Median 0.16 mg/l as N Maximum

3. The discharge shall not cause a violation of any applicable water quality standard for receiving water adopted by the Board or the State Water Resource Control Board as required by the Clean Water Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Clean Water Act, or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

D. Sludge Requirements

1. Permanent sludge storage or disposal activities are not authorized by this permit. A Report of Waste Discharge shall be filed and the site brought into compliance with all applicable regulations prior to commencing any such activity.

2. The treatment, disposal, storage, orprocessing of sludge shall not create a condition of pollution or nuisance as defined in Section 13050(l) and (m) of the California Water Code.

3. The treatment, disposal, storage, or processing of sewage sludge shall not cause waste material to be in any position where it is, or can be, carried from the sludge treatment, disposal, storage, or processing site and be deposited in waters of the State.

4. Any sludge treatment, disposal, storage, or processing site shall hae facilities adequate to divert surface runoff from adjacent areas, to protect boundaries of the site from erosion, and to prevent any conditions that would cause drainage from the materials in the disposal site to escape from the site. Adequate protection is defined as protected from at least a 100-year storm and from the highest tidal stage that may occur.

5. The direct or indirect discharge of sludge waste to waters of the State is prohibited.

6. Sludge management and disposal practices shall comply with all current state and EPA regulations, including 40 CFR 257.

7. This permit may be reopened to include sludge management requirements pormulgated under Section 405 (d)(2) of the Clean Water Act, provided that the existing permit contains less stringent sludge management requirements.

8. The Discharger shall provide written notice to the Regional Board at least 90 days prior to making any significant changes in sludge disposit practices.

D. Provisions

1. The requirements prescribed by this Order supersede the requirement prescribed by Order No.85-61. Order No. 85-61 is hereby rescinded.

2. Where effluent concentration limitations in are contained in this permit, the following mass emission limitations shall also apply:
Mass Emission Limit (in lbs/day or kg/day) = Concentration Limit in mg/l x (8.34 or 3.79) x Actual flow in mgd averaged over the time interval to which the limit applies.

3. The discharger shall comply with all sections of this Order immediatedly upon adoption.

4. The discharger shall review and update its Operations and Maintenance Manual annually, or in the event of significant facility or process changes, shortly after such changes have occurred. Annual revisions, or letters stating that no changes are needed, shall

be submitted by December 30 of each year. Documentation of operator input and review shall accompany each annual update.

5. The discharger shall review and update annually its contingency plan as required by Board Resolution No. 74-10. The discharge of pollutants in violation of this Order where the discharger has failed to develop and/or implement a contingency plan will be basis for considering such discharge a willful and negligent violation of this Order pursuant to Section 13387 of the California Water Code.

6. The discharger shall comply with the attached self-monitoring program. The Executive Officer may make minor amendment to it pursuant to federal regulations (40 CFR 122.63).

7. The discharger shall comply with all items of the attached "Standard Provisions and Reporting Requirements" dated December, 1986.

8. This Order expires June 20, 1995. The discharger must file a report of waste discharge in accordance with Title 23, Chapter 3, Subchapter 9 of the California Administrative Code not later than 180 days in advance of such expiration date as application for issuance of new waste discharge requirements.

9. This Order shall serve at National Pollutant Discharge Elimination System Permit pursuant to Section 402 of the Clean Water Act or amendments thereto, and shall become effective 10 days after the date of its adoption provided the Regional Administrator, Environmental Protection Agency, has no objection. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.

I, Steven R. Ritchie, Executive Officer do hereby certify the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region on June 20, 1990.

STEVEN R. RITCHIE
Executive Officer

Attachments:
Standard Provisions & Reporting Requirements, December 1986
Self-Monitoring Program
Resolution 74-10

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

FOR

U.S. NAVY, NAVAL SUPPORT ACTIVITY

TREASURE ISLAND, SAN FRANCISCO COUNTY

NPDES PERMIT NO. CA0110116

ORDER NO. 90-081

CONSISTS OF

PART A, dated December 1986

AND

PART B

PART B

I. DESCRIPTION OF SAMPLING STATIONS

A. Influent

Station	Description
A-1	At any point in the treatment facilities headworks at which all waste tributary to the system is present and preceding any phase of treatment that may alter influent character.

B. Effluent

Station	Description
E-001	At any point in the disinfection facilities at which point adequate contact with the disinfectant is assured.

C. RECEIVING WATER - OFFSHORE STATIONS

Sampling stations shall be located offshore at the following distances from the outfall (see figure 1):

Station	Description
CS-1	100 feet northwest of outfall
CS-2	Directly over outfall
CS-3	100 feet east of outfall
CS-4	100 feet south of outfall
CS-5	1600 feet northwest of outfall (reference station)

Station locations may be modified upon written request from the discharger to the Executive Officer within 90 days of adoption of these requirements.

D. OVERFLOWS AND BYPASSES

Station	Description
OV-1 through OV-'n'	Bypass or overflows from stations, or collection system.

Note: Initial SMP report to include map and description of each known bypass or overflow location.

Reporting - Shall be submitted monthly whenever bypass or overflow occurs and shall include date, time, and period of each overflow and/or bypass.

11. Sampling Schedule

The schedule of sampling, analysis, and observations shall be that given in Table 1.

I, Steven R. Ritchie, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in the Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No.90-081.

2. Is effective on the date shown below.

3. May be amended by the Executive Officer pursuant to 40 CFR 122.63.

STEVEN R. RITCHIE
Executive Officer

Effective Date: June 20, 1990

Attachments: Table I (2 pages)
Notes for Table I
Figure 1 - Offshore sampling station locations

TABLE I (1), (9)

SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

NPDES PERMIT NO. CA0110116 ORDER NO. 85-61

Sampling Station	A-1	E-001			All CS Sta. (10)		All P Sta.		All OV Sta.				
TYPE OF SAMPLE	C-24	G (4)	C-24	Cont	G (7)		O		O				
Flow Rate (mgd)				D									
BOD, 5-day, 20° C, or C BOD (mg/l & kg/day) (3)	3/W		3/W										
Chlorine Residual & Dosage (mg/l & kg/day) (6)		2H	or	Cont									
Settleable Matter (ml/1-hr. & cu. ft./day)		3/W											
Total Suspended Matter (mg/l & kg/day) (3)	3/W		3/W										
Oil & Grease (mg/l & kg/day) (2)	M	M											
Coliform (Total or Fecal) (MPN/100 ml) per req't		3/W			M (8)								
Fish Toxicity, 96-hr. TL_{50} % Survival in undiluted waste (5)			M										
Ammonia Nitrogen (mg/l & kg/day)													
Nitrate Nitrogen (mg/l & kg/day)													
Nitrite Nitrogen (mg/l & kg/day)													
Total Organic Nitrogen (mg/l & kg/day)													
Total Phosphate (mg/l & kg/day)													
Turbidity (Jackson Turbidity Units)													
pH (units)		3/W			M								
Dissolved Oxygen (mg/l and % Saturation)					M								
Temperature (°C)		3/W			M								
Apparent Color (color units)													
Secchi Disc (inches)													
Sulfides (if DO < 5.0 mg/l) Total & Dissolved (mg/l)					M								
Arsenic (mg/l & kg/day)			Q										
Cadmium (mg/l & kg/day)			Q										
Chromium, Total (mg/l & kg/day)			Q										
Copper (mg/l & kg/day)			Q										
Cyanide (mg/l & kg/day)			Q										
Silver (mg/l & kg/day			Q										
Lead (mg/l & kg/day)			Q										

TABLE 1 (continued) (1), (9)

NPDES No. CA0110116 SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS ORDER NO. 85-61

Sampling Station	A-1	E-001			All CS Sta. (10)		All P Sta.		All OV Sta.				
TYPE OF SAMPLE	C-24	G (4)	C-24	Cont	G (7)		O		O				
Mercury (mg/l & kg/day)			Q										
Nickel (mg/l & kg/day)			Q										
Zinc (mg/l & kg/day)			Q										
Phenolic Compounds (mg/l & kg/day)			Q										
All Applicable Standard Observations		D			M		W		E				
Bottom Sediment Analyses and Observations													
Total Ident. Chlor. Hydrocarbons (mg/l & kg/day)													
Un-ionized Ammonia as N (mg/l)					M								
PAH (mg/l)			Q										
Selenuim (mg/l)			Q										

LEGEND FOR TABLE

TYPES OF SAMPLES

G = grab sample
C-24 = composite sample - 24-hour
C-X = composite sample - X hours (used when discharge does not continue for 24-hour period)
Cont = continuous sampling
DI = depth-intergrated sample
BS = bottom sediment sample
O = observation

TYPES OF STATIONS

I = intake and/or water supply stations
A = treatment facility influent stations
E = waste effluent stations
C = receiving water stations
P = treatment facilities perimeter stations
L = basin and/or pond levee stations
B = bottom sediment stations
G = groundwaters stations

FREQUENCY OF SAMPLING

E = each occurence
H = once each hour
D = once each day
W = once each week
M = once each month
Y = once each year

2/H = twice per hour
2/W = 2 days per week
5/W = 5 days per week
2/M = 2 days per month
2/y = once in March and once in September
Q = quarterly, once in March, June, Sept. and December

2H = every 2 hours
2D = every 2 days
2W = every 2 weeks
3M = every 3 months
Cont = continuous

NOTES FOR TABLE I

1. During any day when bypassing occurs from any treatment unit(s) in the plant or to the emergency bypass, the monitoring program for the effluent and any nearshore discharge shall include the following in addition to the above schedule for sampling, measurement, and analyses:

   a. Composite sample for BOD (or CBOD) and Total Suspended Solids.

   b. Grab samples for Total Coliform, Settleable Matter, and Oil and Grease.

   c. Continuous monitoring of flow.

   d. Continuous or every two hour monitoring of chlorine residual.

2. Oil and Grease sampling shall consist of a grab sample. In the event that sampling for oil and grease shows an apparent violation of the waste discharge permit, 30-day average limitation (considering the results of one or two days' sampling as a 30-day average), then the sampling frequency shall be increased to weekly so that a true 30-day average can be computed and compliance can be determined.

3. Percent removal (effluent vs. influent) shall also be reported.

4. Grab samples shall be collected on day(s) of composite sampling.

5. Sample date for bioassay shall coincide with composite sample(s). Fish toxicity shall be calculated and reported as the percent survival of test fish for the month of analysis and as the 90th percentile value for the last ten analyses.

6. Data shall be reported using forms provided by the Board or an approved equivalent; chlorine residual analyzers shll be calibrated against grab samples as frequently as necessary to maintain accurate control and reliable operation. If an effluent violation is detected, grab samples shall be collected every 30 minutes and analyzed until compliance is achieved.

7. Samples should be collected within one foot below the surface of the receiving water body.

8. Five (5) samples per station per day shall be collected in order to determine the median of five samples taken within the last consecutive 30-day period. Samples may be collected at the same time at each station. Weekly sampling may be substituted provided that five samples within the 30-day period are collected in order to determine the median count for the station.

9. All flow other than to the outfall (e.g. sludge, etc.) shall also be reported monthly. Daily records shall be kept of the quantity (cu. yds. or cu. ft.) and solids content (%) of dewatered sludge disposed of and the location of the disposal site.

10. Receiving water monitoring frequency and sampling parameters may be

reduced at the discharger's request and demonstration and as approved by the Executive Officer when a data base has been established.

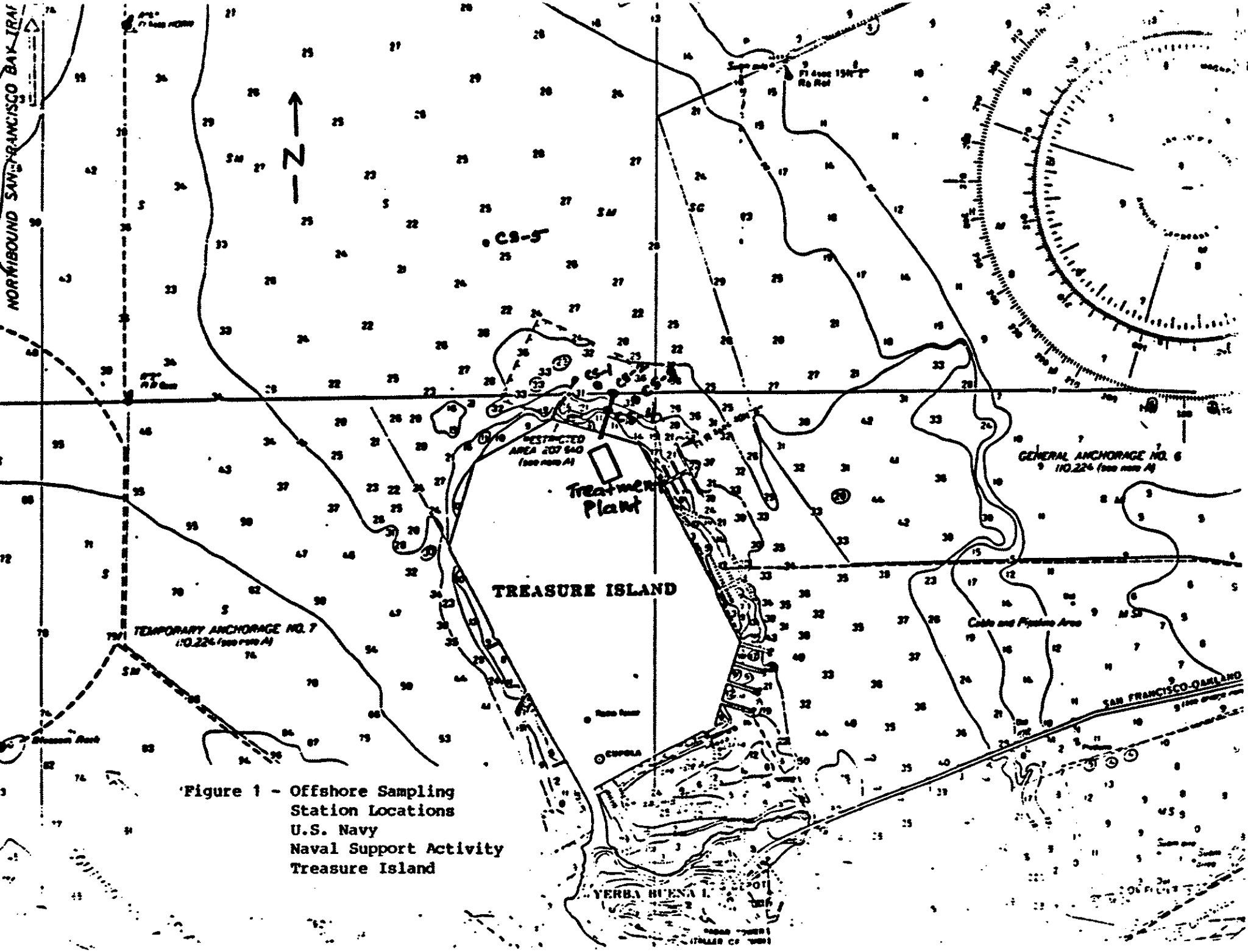

Figure 1 - Offshore Sampling Station Locations
U.S. Navy
Naval Support Activity
Treasure Island